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JCS86 U.S. PTO

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Mark D. Owen, Bonnie A. Larson,  
and Jozef Van Puymbroeck

Group Art Unit: 1742

Application No. 08/651,036

Filed: May 17, 1996

For: **METHOD EMPLOYING UV LASER PULSES OF VARIED  
ENERGY DENSITY TO FORM DEPTHWISE SELF-  
LIMITING BLIND VIAS IN MULTILAYERED TARGETS**

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5/12/98

Date: May 1, 1998

Examiner: Gregory Mills

AMENDMENT

TO THE ASSISTANT  
COMMISSIONER FOR PATENTS:

In response to the April 3, 1998 Office action, please amend the  
above-identified patent application as follows.

In the Claims:

Amend claims 29 and 31 as follows:

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D1

~~22~~ 29. (Amended) The method of claim [28] ~~21~~ in which the second  
spatial spot size is greater than the first spatial spot size.

D2

~~23~~ 31. (Amended) A method for laser machining a blind via in a  
multilayered target including at least first and second conductor layers  
having respective first and second conductor ablation energy thresholds and  
a dielectric layer having surfaces and a dielectric ablation energy threshold,  
the first and second conductor layers positioned above and below,  
respectively, the surfaces of the dielectric layer, comprising:

generating, from a nonexcimer laser at a repetition rate of greater  
than about 200 Hz, a first laser output having a wavelength of less than 400  
nm and containing at least one first laser pulse having a first energy density  
over a first spatial spot size and a temporal pulse width shorter than about